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"Results-Based Budgeting"

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Chapter 13
Results-Based Budgeting

"Look at life through the windshield, not the rearview mirror."

Budgeting is the annual (sometimes biennial) process by which organizations estimate their resource needs and allocations for the future. This chapter focuses on how performance measurement information, particularly outcome data, can be used to assist budget formulation and review.

For many governments, making the budget process more results-based has been the primary motivation for legislating performance measurement. A budget process should encourage, if not demand, a performance orientation.

Results- or Performance-Based Budgeting: Widely Acclaimed, But Is Anyone Doing It?

Results-based budgeting, more frequently called performance-based budgeting, gives outcomes central attention in the budget process. Presumably, it emphasizes the importance of outcome data in both formulating and justifying proposed budgets. Much lip service has been paid to the topic. Unfortunately, it is not clear how much real attention has been devoted to the actual use of outcome information in budgeting. The suggestions in this chapter identify procedures for incorporating outcomes into a budget process. Individual agencies will need to devote time to refining the process.

Results-oriented performance measurement provides basic information to the staff formulating, and subsequently justifying, a budget. The information helps locate problems and successes that may need additional or reduced resources. *The key element of results-based budgeting is that it attempts to consider, if only roughly, the future values of performance indicators—the amount of outcomes expected from proposed resources—and projected outputs.*

Agencies preparing performance budgets project values for each performance indicator for the forthcoming year(s). Projections of outputs and outcomes are intended to reflect the estimated consequences of the resources budgeted. These projections represent what the agency is getting for its money. *The data from an agency's performance measurement system should provide basic information for developing budget proposals and subsequently help justify the budget proposals that have already been developed.* This information is likely to have even greater weight if linked to strategic plans.

By focusing systematically on the results sought, results-based budgeting should better enable decisionmakers to achieve the following:

- *Identify poorly performing programs*, thereby signaling the need to make changes and allocate less or more funds. (Other information is needed to determine which changes to make.)
- *Identify programs that are performing well* and presumably need no significant changes. (Even here, other information is needed to determine what, if any, changes may be desirable.)
- *Assess new programs* for what they are expected to accomplish, not just their costs or general statements of their expected value. Are the new programs worth their expected costs?
- *Compare different proposed options* on their expected outcomes and costs.
- *Help identify agency activities that have similar outcome indicators* and, thus, are candidates for coordination and perhaps revised funding needs.
- *Justify budget choices more effectively* to agency and elected officials—and the public.
- *Provide the basis for greater agency accountability,* if reasonable performance targets are set for the budget year and achieved values are subsequently compared to targets.

The first three points are discussed at length in chapter 10—primarily in the context of analyzing performance information for changing programs and policies during the budget year. This chapter focuses on using the same information to establish and examine budgets.

Results-based budgeting supports an overall agency focus on outcomes. Here is an example of its use in helping justify budgets:

> The Massachusetts Department of Environmental Protection sought to obtain funding from the state legislature to line unlined landfills. It justified the expenditure by reporting the product of the expenditure as *the number of acres expected to be lined*. This did not move the legislature, which turned down the request. The department then switched to a more outcome-based approach and justified the request in terms of *gallons of leachate prevented*. Legislators asked for a definition of leachate. When they found that it referred to potential pollutants leaked into the groundwater and water supply, they approved the funding request.[1]

The U.S. Office of Management and Budget has instituted probably the most extensive use of outcome information as part of its PART process. OMB reviews each major federal program on a number of performance factors, including results achieved. OMB has emphasized that the ratings are not the only factor in decisions and that low (or high) scores do not necessarily mean decreased (or increased) funding. Nevertheless, the ratings appear to have affected, or at least supported, some funding decisions.[2]

In a performance-based budgeting system, agencies need to select targets (make projections) for the budget year for each output, outcome, and efficiency indicator, as well as for expenditures.[3]

A key problem for results-based budgeting, especially at the state and federal levels, is to persuade legislators and legislative staffs to switch from primary dependence on line-item budgeting to an outcomes focus. At the very least, legislators and their staffs need to address outcomes during appropriation hearings. The executive branch is responsible for providing meaningful, reliable, important outcome information to its legislators—in a user-friendly format. When some state governments initiated their results-based budgeting efforts, they loaded legislators with large numbers of indicators and data (sometimes including outputs and outcomes mixed in together) presented unattractively, thus discouraging their use.

This book does not cover budgeting in general. Instead, it addresses the new dimension of outcome information. The key issues in results-based budgeting are listed in exhibit 13-1 and discussed later in this chapter—after a bit of history.

A Bit of History

Performance budgeting has been around at least since the 1960s. At that time, it focused primarily on the relationship between inputs and outputs. Some communities (such as Milwaukee, Wisconsin, and Nassau County, New York) produced budgets that contained hundreds of unit-cost measurements linking costs or employee-hours to outputs. Sunnyvale (California) has used such measurements since the early 1970s, converting unit costs into productivity indices focusing on outputs. These indices permit comparisons across services and across years. More recently, Sunnyvale has begun focusing on outcomes.

A typical output-based performance indicator would be, for example, "the cost (or number of employee-hours) per ton of asphalt laid." In some cases, these output-based indicator reports were dropped because the number of unit-cost indicators overwhelmed the external users of the information. Nevertheless, such unit-cost information can be useful to managers and supervisors (and elected officials, if they wish) for tracking the technical efficiency of their activities.

The major new dimension is to relate outcomes to budget requests. The term *results-based budgeting* reflects this new focus.[4] At both the federal and state levels, recent legislation has emphasized the concept that budget decisions should be made not based on dollars alone, nor on physical outputs, but in relation to outcomes.

Of the many recent performance measurement systems that have been initiated to provide some form of results-based budgeting, the Government Performance and Results Act (GPRA) of 1993 is a prime example (recently expanded to include the PART process discussed briefly above). This federal budget action was unique in (a) having support from both political parties and both the executive and legislative branches and (b) being explicitly embodied in legislation, unlike earlier approaches such as the Planning-Programming-Budgeting-System (PPBS), Zero-Based Budgeting (ZBB), and Management by Objectives (MBO).

The Texas, Oregon, and Louisiana legislatures were among the first states to legislate a form of results-based budgeting, sometimes including selected outcome indicators with recent and projected data in their appropriations acts.

Key Issues in Results-Based Budgeting

1. Need to Increase Focus on Outcomes, Not Only Inputs and Outputs

Using outcome information for budgeting seems quite sensible on the surface, but in fact, its use in budgeting for agency operations is controversial. It has been, for example, the major subject of debates comparing the New Zealand to the Australian and U.S. approaches to budgeting at the federal level. New Zealand's approach had been to hold its operating departments responsible for outputs but not outcomes—and to use performance agreements with department heads to hold them accountable for outputs. New Zealand's rationale was that agencies control outputs, but too many other factors beyond the control of the operating departments affect outcomes. Only ministers were held responsible for outcomes. New Zealand has recently changed back to including outcomes in department responsibilities.

The counterargument to the view that agencies should be held responsible only for producing outputs is that outcomes are the fundamental reasons for establishing an agency in the first place. The activities of operating agencies clearly contribute to program outcomes, even if no single group of people, whether operating personnel or the policymakers themselves, fully controls results. Take as an example income maintenance and public assistance programs. Primarily policy issues are who is eligible for assistance and what level of payments is to be provided. These decisions are made by the legislature and the upper echelon of the executive branch of government. However, if the policy is not implemented well—if program personnel do not execute the policy properly and get the correct checks to the right people quickly—the desired outcomes will be compromised, and program personnel can be at least partly responsible for the failure.

Encouraging agency personnel to work to improve service outcomes seems a much better way to go. Many, if not most, outcomes are produced by many agencies and sectors of the economy, and responsibility is thus inherently shared. This is the implicit philosophy of the Australian and U.S. governments. As suggested in chapter 10, agencies can rate the extent of their influence over individual performance indicators in their performance reports. This alerts users to the inherent limitations of outcome information while retaining a degree of responsibility for each agency.

The controversy over output versus outcome responsibilities has been less an issue at lower levels of government (especially at the local level).

2. *Limitations in the Usefulness of Performance Measurement Information for Results-Based Budgeting*

Performance measurement looks *backward*. It attempts to provide the best possible data on what happened in the past. Past outcome data provide important information for projections, *but estimating future outcomes differs radically from assessing past performance*. Past trends are only one among many influences on future outcomes. The future effects of those other influences are inevitably a matter of uncertainty, particularly in cases where little is known about the *quantitative* relationship between inputs and outcomes.

Suggestion: For outcome forecasts that are particularly uncertain, provide a range of values instead of a single value. This range is likely to be more realistic and informative.

3. *Time Frame to Be Covered by Results-Based Budgeting*

Typically, budgets only present data for the current budget year(s). Some central governments, such as those of the United States and Australia, now also include out-year funding estimates (perhaps for three additional years) but not outcome projections, except in separate long-run strategic plans. Including out-year forecasts for outcomes can be important for some programs, particularly at the federal and state levels, for three reasons:

- It reduces the temptation for agencies and their programs to focus all their funding decisions on the short term.
- For some programs, achievement of the hoped-for outcomes will require funds not only from the current year's budget but from future budgets as well.
- When important outcomes will not occur until after the proposed-budget period, the outcome targets for the budget year will not reflect those effects.

Therefore, budget proposals, especially those of the higher levels of government, should include out-year estimates for some outcomes, regardless of whether this information is included in the final appropriation document. For many programs, organizations will be able to better allocate resources when they explicitly consider expected costs and outcomes for out-years. For example, the results of funding a new federal or state program to reduce alcohol abuse might not be apparent for two or more years. (Time will be needed to gain acceptance by localities, train staff members in the program, publicize and run the program, make sure clients receive the program's services, and then measure the outcomes.)

Even for intermediate outcome indicators, measurable effects may not be expected until after the budget year. Another example: Road construction can reduce accidents and congestion over several years. Should not estimates of the magnitude of these future improvements be included in the budget justification?

A partial solution is to build into the budget process any important outcomes expected to occur because of the proposed new funding. Programs would be asked to estimate the values for each outcome indicator for each out-year the proposed budget funding is expected to significantly affect. Requiring outcome projections in the budget development process is likely to encourage agencies to consider multiyear effects.

For some programs, this forecasting can be done readily. For example, a federal program to help residential housing might request funds for rehabilitating the homes of a certain number of families. The program can probably predict the years in which those rehabs will occur and the number of families occupying the housing units. A program that provides drug treatment funding will find it more difficult to estimate the number of clients who will become drug free and in which years. Performance measurement data on past success rates will likely help those preparing or reviewing the budget to estimate such outcomes.

A less demanding option is to ask for estimated future outcomes without requiring that they be distributed by year.

The need to consider future outcomes of the current year's budget is less frequent for local than for federal and state programs. But even at the local level, some programs, such as school and health programs, will have long-term outcome goals.

Most governments have not addressed the problem of long-term outcomes . A partial exception is that some state governments separate expansion requests (including new programs) from requests for continuation of current programs. For expansion requests, these governments require out-year projections of future outcomes.

4. Whether Proposed Inputs Can Be Linked to Outputs and Outcomes

In analyzing performance information for budgeting, a critical step is to link information on proposed costs to the projected amount of output and outcomes. Results-based budgeting and similar resource allocation efforts (including strategic planning) enter into this new dimension—*estimating the link between inputs and expected future results*. Such estimates can be subject to considerable uncertainty.

Part of the uncertainty relates to lack of good historical cost, output, and (particularly) outcome information. This problem is potentially curable. More difficult is estimating *future* costs. Even more difficult is estimating the amount of expenditures needed to increase outcomes, especially end outcomes, by specific amounts. Typically, programs do not know with any certainty how much more (or less) funding or staffing is needed to increase (or reduce) an end outcome by a certain amount. As programs gain experience with their outcome data, they should be able to better estimate this relationship, although it will never be as predictable as the relationship between funding or personnel and output indicators.

Projecting accurately becomes increasingly difficult and uncertain as programs move from linking inputs to outputs, to linking inputs to intermediate outcomes, and, finally, to linking inputs or outputs to end outcomes. The following sections discuss the links between inputs, outputs, intermediate outcomes, and end outcomes. Little past work has examined these latter relationships.

Linking inputs to outputs. The amount of output expected in the budget year can be used to estimate the associated costs and personnel requirements or vice versa. If the amounts of dollars and personnel are the starting point for the budget, the amount of output achievable can be estimated.[5] Many, if not most, programs can estimate somewhat accurately how much workload they are likely to have, and thus the amount of output they can accomplish, given particular amounts of staff and funds. Programs will likely have reasonably accurate counts of past outputs and the direct costs of employee time. If they do not currently record such information, they can obtain it.[6]

If funding needs are developed from estimates of the workload, estimates of future expenditures of employee time and money will be affected by the program's ability to estimate accurately the magnitude and character of the budget year workload and the effects of any new service procedures or technology. For example, school systems try to estimate the next year's school population in order to decide about school buildings, classrooms, teachers, and purchases of books and other teaching materials. Inaccurate projections have been known to embarrass school officials.

Performance measurement information from earlier years normally provides the basis for projecting the relationship between inputs and outputs for the current budget year. However, if the *complexity of the workload* during the forthcoming budget year is likely to differ substantially from that in previous years, this change needs to be considered when developing the budget. For example, the Internal Revenue Service can tabulate the number and complexity of tax returns that come in each year. However, many factors—such as revisions to the tax code—can alter the future mix of tax-return difficulty and thus the amount of time required to review and process returns.

External factors can also affect future workload. For example, at the state and local levels, weather conditions, such as freeze-thaw conditions, can have substantial effects on costs, outputs, and outcomes. Agencies can obtain projections of these for the budget year, affecting such performance indicators as estimates of future roadwork and costs, and accident and injury rates. Similarly, the number and characteristics of incoming clients, such as their need for employment, health, and social service programs, can be highly unpredictable because they are affected by many economic and social factors—and projections based on past data are by no means certain. For some programs, agencies can use reasonably reliable estimates of their client populations, but these are also subject to uncertainties, such as increased immigration from countries in crisis.

Linking inputs to intermediate outcomes. Precise relationships between past input data and past intermediate outcome data can be developed for some outcome indicators. Even so, past relationships between the intermediate outcomes and inputs will

usually provide only rough indications of what will happen in the budget year. For example, federal agencies such as the departments of Education, Housing and Urban Development, Health and Human Services, and Labor as well as the Environmental Protection Agency provide much of their assistance to state and local agencies rather than to the ultimate customers. If these state and local agencies undertake promising steps that the federal department has encouraged, the steps can be considered intermediate outcomes for that department. Data on the past relationship between the amounts of federal funds and assistance, on the one hand, and the extent to which the state and local governments undertook promising initiatives, on the other, are likely to be useful. But the past relationship provides only a rough estimate of what state and local agencies will do in the budget year.

Some intermediate outcomes can be estimated relatively accurately. For example, agencies can make fairly accurate estimates of such intermediate outcomes as future response times, given particular amounts of staff and dollar resources.[7] Even here, however, a number of outside factors over which the program has little control can intervene. For example, an unexpectedly large number of requests for service or changes in the proportion of complex requests can have major effects on response times.

Here are some examples of difficult-to-predict intermediate outcomes:

- Number of businesses (or households) that alter their handling of waste to be more environmentally prudent after receiving assistance from state or local programs
- Number and percentage of parents who take special parenting classes and then alter their behavior in ways that encourage their children's learning in school
- Customer satisfaction

All these outcomes are driven not only by agency efforts to seek certain customer behaviors and perceptions but also by many aspects of the behavior and circumstances of the customers themselves, as well as outside factors.

The bottom line is that agencies should expect historical data on costs and intermediate outcomes to be useful in preparing cost and intermediate outcome information for budgets. In many cases, however, agencies will be able to make only rough projections about the future relationship between costs and intermediate outcomes.

Linking inputs to end outcomes. As a rule, agencies should not expect to have solid, known relationships between inputs and end outcomes, no matter how good the historical data are. (In more economic terms, little information is available about the production function that relates the inputs to the end outcomes.) Nevertheless, these relationships are extremely important and need to be considered, *at least qualitatively*, in any budget process.

Some end outcomes are easier to relate to inputs than others. For example, the number and percent of a state or local jurisdiction's roads that are in satisfactory condition can be considered an end outcome indicator for road maintenance services.

These numbers relate closely to the funds that the agency applies to road maintenance and repair. Past data on this relationship can be used to estimate the expenditures needed in order to achieve a certain value for this outcome indicator (or conversely, to estimate the percent of road miles in satisfactory condition given a particular funding level). In contrast, how much a client's condition is improved by expenditures of particular amounts of federal, state, local, or private funds to reduce substance abuse or to enhance elementary education is considerably more difficult to estimate.

Projecting how well budgeted resources will achieve *prevention* (whether of crime, disease, family problems, or so on) is extremely difficult. At best, the historical data will provide very rough clues about the relationship between resources and prevention. In-depth studies can provide evidence, but decisionmakers may need to rely more heavily on qualitative information and subjective judgments on the prevention outcomes expected from a particular level of budgeted resources.

In general, the more direct a program's influence over an outcome, the greater the program's ability to develop numerical relationships between inputs and the outcome. Local governments and private agencies generally have more direct influence on end outcomes than state or federal agencies; therefore, the relationships between their inputs and outcomes (both intermediate and end) are likely to be clearer. Nevertheless, for many end outcome indicators, the relationship will inevitably be imprecise. How many more resources would be needed to increase the percentage of customers satisfied with their recreation experiences by 5 percentage points (such as from 65 percent to 70 percent)? The answers to questions like this usually can be estimated only very roughly, at best.

If identifying the quantitative (or even qualitative) relationships between size and type of input, type of intervention, and amount of outcomes achieved is likely to be crucial to future major budget decisions about an existing program, agencies should seek an in-depth program evaluation.

Agencies can systematically track changes in resources to assess the differences on outcomes and then use that information to help make future budget estimates. Agencies and their programs might also be able to intentionally alter the amount of input to certain activities to see how more or fewer resources affect outcomes—and then use such information for future estimates.

Linking outputs to outcomes. Outcomes presumably flow from outputs. For example, the number of calls answered is an output for a service (whether these calls relate to police, fire, sewage backups, travel information, or any other service request). This output leads to outcomes, such as what resulted and whether the requests were fulfilled to the customers' satisfaction . Some outcome indicators explicitly relate outputs to outcomes, such as "the percent of those to whom services were provided (an output) who had successful outcomes."

Staff preparing or reviewing budget proposals should examine the amount of output expected in the budget year and assess what outcomes can be expected from that

number—and when. If *X* customers are expected to be served during the budget year (an output), how many customers (and what percent) can be expected to be helped to achieve the desired outcomes that year and in future years (an outcome)? For example,

- how many persons are expected to find employment after receiving training services, and when?
- what percentage of babies born to low-income women who received appropriate prenatal care will be healthy?

Those preparing the budget request and those subsequently examining it should *ascertain that the outcome numbers make sense relative to the amount of output*. For services that have lengthy lag times between outputs and outcomes, the outcome numbers for the budget year need to be compared to output numbers *in the relevant previous years*.

Linking intermediate outcomes to end outcomes. It is likely to be difficult to provide quantitative relationships between intermediate and end outcomes, but it is often easier than directly estimating the relationships between input and end outcomes. For example, a state agency might provide funds or technical assistance to local agencies to undertake an environmental protection regulation designed to lead to cleaner air. The relationship between the local agency's successfully getting businesses to adapt better practices for handling hazardous wastes (an intermediate outcome for both the state and local agencies) and the extent to which cleaner air results (an end outcome for both agencies) is uncertain. Some relationships are clearer, such as the extent to which increased percentages of children vaccinated against a disease can be expected to lead to reduced incidence of the disease among the vaccinated population.

How to make these links? For most programs, knowledge about most of the above links is lacking. Historical data from the performance measurement process, even if it has been implemented for only one or two years, can provide clues. But there will almost always be considerable uncertainty about projections of outcomes, especially end outcomes, for given budget levels. A key is to be able to make *plausible* connections between the amount of budgeted funds and the outcomes projected. These connections can be based on past performance and modified by information on changes in either internal or external factors expected in the budget year.

5. The Role of Efficiency Indicators

Efficiency is an important consideration in the budget process. As noted earlier, efficiency is traditionally measured as the *ratio of inputs to outputs*. The new type of indicator added in results-based budgeting is *ratios of inputs to outcomes*. An example of this is "cost per person served *whose condition improved significantly after receiving the service*." The more traditional output-based efficiency indicator is "cost per person served."

When reasonably solid numerical relationships exist between outputs or outcomes and the associated inputs, past data can be used to develop historical unit-cost figures, such as the "cost per lane-mile of road maintained" or the "cost per lane-mile rated as in good condition." These figures can then be used to make estimates for the budget year. Likely future factors need to be factored in. For example, road maintenance budget estimates should consider any planned price changes, any new technologies that might be used and their cost, and any indications that repairs will be more extensive or more difficult than in past years.

Some outcomes, such as road condition, can reasonably be numerically related to outputs, such as the number of lane-miles expected to be repaired during the budget year for a given dollar allocation. Budget preparers and reviewers can then examine various levels of the number of lane-miles to be repaired for various levels of expenditures and estimate the number of lane-miles that will be in satisfactory condition for each expenditure option. *These estimates will inform decisionmakers of the trade-offs between costs and outcomes, so they can select their preferred combination.*

In police investigative work, "number of cases cleared per police dollar or per investigation hour" is an outcome-based efficiency indicator. Past data on clearances can be used to make estimates for the forthcoming budget. However, the number and percent of crimes cleared in the budget year will also depend significantly on the number of crimes reported (many more crimes may mean investigators have less time to spend on individual cases), the types of crimes (for example, burglaries have substantially lower clearance rates than robberies), and the amount of evidence available at the scene. Factors largely outside the control of the police department (such as case difficulty) as well as internal factors (such as the amount of investigator turnover and the quality and quantity of investigative effort) can significantly affect clearance rates. Trends in such factors should be considered when projecting clearance rates from past efficiency data.

The use of unit costs in which the units are *outputs* is common in budgeting. However, the use of unit costs in which the units are *outcomes* is rare. One reason for this is that outcome data have not often been part of the budget preparation process. This is changing. In the future, the primary reason for limited use of costs per unit of outcome will be not lack of outcome data but rather lack of solid numerical relationships between inputs and outcomes.

6. Setting Performance Targets in Budgets

The projected values for individual outcome indicators are important numbers in results-based budget submissions. In view of the considerable uncertainty surrounding future conditions and the links between agency resources and indicator values, how should agencies develop these targets? Suggested steps are listed in exhibit 13-2. The specific factors to consider are listed in exhibit 13-3.[8] Addition suggestions are provided in chapter 9.

Two special target-setting options are available to programs that are highly uncertain about the future values of one or more outcome indicators: variable targets and target ranges.

The *variable target option* applies to outcome indicators whose values are believed to be highly dependent on a characteristic of the incoming workload *and* where major uncertainty exists about that characteristic. In this procedure, the expected relationship between the characteristic and outcome is identified first. The final outcome target is determined *after the fact*, depending on the workload characteristics that actually occurred in the budget year.

For example, if an outcome is expected to be highly sensitive to the mix of workload (e.g., customers) coming in, and the mix for the budget year is subject to considerable uncertainty, the program can set targets for *each category* of workload without making assumptions about the workload mix. The *aggregate target* is determined after the budget year closes and the mix is known.

For the indicator "percent of people who leave welfare for work," the program might set separate targets for groups defined by their amount of formal education. Suppose the program estimated that 75 percent of people coming in with at least a high school diploma would find jobs and get off welfare in the budget year, but only 30 percent of those with less than a high school education would do so. These targets would be presented in the budget. The aggregate percent, which might also be included, would be based on the program's estimated mix of clients.

At the end of the year, the aggregate target for the year would be calculated for the actual education mix and compared to the aggregate percent. If 420 people who had not completed high school and 180 people who had completed high school entered the program during the year, the aggregate target would be 44 percent—30 percent of 420 (126) plus 75 percent of 180 (135), equaling 261. Dividing 261 by the total number in the program that year (600) yields the aggregate target for the share expected to go off welfare, 44 percent.

The target might also be linked to the national unemployment rate. For example, the program target might be 15 percent of enrollees off welfare if the national unemployment rate turned out to be over 5.4 percent and 25 percent off welfare if the national unemployment rate turned out to be less than 5.0 percent. The program would not know if it achieved the target until the national figure became available. Another option is to use a formula that relates expected outcome to the value of the external factor—in this example, a formula that relates the expected percentage off welfare to the national unemployment rate.

The *target range option* applies to any outcome indicator with highly uncertain future values. A range of values, rather than one number, is given as the target for the indicator. Many programs might benefit from this approach, especially for their end outcomes. Here are some examples of target ranges:

- The customer satisfaction level is expected to be in the range of 80 percent to 87 percent.
- The percentage of clients who will be off illegal drugs 12 months after program completion is expected to be between 40 and 50 percent.

The danger of gaming and ways to alleviate it. As higher-level administrators and elected officials begin to use targets in budget documents, the temptation to game targets will inevitably grow. Such gaming can occur at any level. Program managers and upper-level officials might set targets so their projected outcomes will look good. (This is an argument for legislators to ask independent audit offices to review and comment on proposed budget targets, especially at the state and federal levels.) Elected officials might manipulate targets for political purposes.

Setting targets that are easy to achieve will be tempting to those whose funding or individual compensation is based significantly on achieving targets. The opposite—setting very optimistic, if not impossible, targets—is tempting to those seeking support for high budgets.

The following are some ways to alleviate gaming:

- Establish a multilevel review process in which executive personnel check targets to identify values that appear overly optimistic or overly conservative.
- Examine the past relationships between inputs, outputs, and outcomes to see if the proposed targets are consistent with those relationships.
- Use one of the special target-setting options noted above to avoid a single-number target. These ranges can still be gamed, but the effects of gaming should be reduced.
- Explicitly identify in performance reports any future outcomes that are particularly difficult to estimate. Budget documents should also identify new outcome indicators, pointing out that setting targets for them is particularly difficult because there is no experience on which to base estimates.
- Ask programs to provide explanations for unusual-looking targets.
- Reduce reliance on major incentives that link funding or salary compensation to target achievement. However, pressure to link compensation to target achievement is likely to increase as agencies switch to outcome-based target-setting procedures. In such cases, an in-depth examination of the reasons for highly successful or highly unsuccessful outcomes should be undertaken before final funding or salary decisions are made.

In some instances, executives and elected officials will prefer unclear, fuzzy goals. For example, school districts have debated whether they should include precise objectives on student test improvement (such as increasing the overall scores by 5 percentage points or reducing the difference in performance between the minority and majority student population by 7 percentage points during the year). These officials might be willing to accept a target range.

Note: Agency personnel sometimes are reluctant to provide targets that are lower than the previous year's targets, even if budget-year resources are lower in real terms (i.e., after allowing for cost increases). They fear this will make them look bad. Even so, it is important that agencies and their individual programs realistically estimate the consequences of reduced resources. Agencies should encourage such reporting if it can be justified. Not being able to do everything they did in the previous year is not a basis for applying blame to programs if resources are cut. Upper management may believe that productivity improvements can make up for the reduced resources (and this may be true—up to a point). If political pressure requires that a program establish published targets that are higher than the program believes are achievable, the distinction should at least be made clear internally.

Setting performance targets is an excellent management tool for agencies, particularly if the targets are provided and progress is examined periodically during the year, such as monthly or quarterly. Even if an agency does not use outcome targets in its budget process, the agency can choose to retain an internal outcome-targeting process.

7. Use of Explanatory Information

As discussed in chapters 10 and 11, agency programs should be encouraged to provide explanatory information along with their past performance measurement data when developing and submitting budget requests.

Staff preparing budgets should examine such information for insights into why the program performed well or poorly and for any suggestions about what is needed to improve it. This information can also help identify program changes likely to affect cost and outcome estimates.

As already noted, the results of any relevant program evaluations should be part of budget preparation and review. The findings on outcomes and the extent to which the program has been instrumental in producing the outcomes are important for judging the value of the current program. Persons who review the program's proposed budget can use later performance data to assess whether the proposed budget reflects the changes suggested by the evaluation. *Program evaluation findings should typically take precedence over findings from the agency's performance measurement system.*[9]

For target values that deviate substantially from past results, agency programs should be encouraged to provide explanations for those targets, especially on key outcome indicators. Such information should identify the basic assumptions used to develop the outcome projections and any important external factors expected to make the outcome value deviate from past performance levels.

Explanatory information on past performance, including any available findings from recent program evaluations, can help identify the reasons for success or lack of it— that is, program strengths and weaknesses. Budget preparers and reviewers can then assess the extent to which steps have been taken, or are needed, to correct problems.

8. Strength of Program Influence over Future Outcomes

Agency managers are usually quite apprehensive about including outcome indicators as a part of their performance measurements. As discussed in previous chapters, managers often have only partial control over outcomes, especially end outcomes.

To alleviate this concern in budget preparation, and to give budget reviewers a better perspective on the projected outcome data, agencies *should consider categorizing each outcome indicator by the extent of the agency's influence over it* (see chapter 6). This will identify the extent to which the agency can affect each indicator relative to outside factors likely to affect the program's outcomes.[10] Note, however, that *agencies and their programs may have more influence than they think.* In many instances, innovative approaches to their missions might influence outcomes in meaningful ways, including making recommendations for legislative changes.

Indicators can be slotted into a small number of broad categories, such as considerable influence, some influence, or little influence. (If the program has no influence over the value of a performance indicator, then it should not be considered a performance indicator. For budget examination purposes, however, programs should be asked to identify the reasons they think they have no influence.)

Lack of influence may indicate that the program is not doing the right things, perhaps requiring major program changes.

9. Using Performance Information in Formulating and Examining Budget Requests

The budget preparation and review process is intended to help ensure that needed resources are budgeted for the most cost-effective purpose. Data on past inputs, outputs, outcomes, and efficiency, as well as explanatory information, allows analysts to formulate and examine program budget proposals much more comprehensively and meaningfully than in the past. Outcome information, even if relatively crude and partial, enables analysts to consider both resource needs and likely outcomes from those resources—and under what conditions results have been good or bad. This adds much more substance to a budget process.

Chapter 10 described how to analyze *past* performance. Similar approaches are useful in results-based budgeting. A later section of this chapter lists and discusses 18 steps for using performance information to examine budget requests—whether inside an operating agency, by a central office such as a budget office, or by elected officials.

10. *Applying Results-Based Budgeting to Internal Support Services*

Governments at all levels and private agencies support a variety of administrative functions, such as building maintenance, facilities maintenance, information technology, human resources, risk management, purchasing, and accounting. The link between the products of such activities and public service outcomes is distant and usually extremely difficult or impossible to determine, even roughly.[11]

These activities are nonetheless important in providing needed support for operating programs. Good management requires that administrative services track their own internal intermediate outcomes (such as the quality of their services to other agency offices). The principles and procedures described in earlier chapters can be readily adapted to administrative services. For example, the types of data collection described in chapter 7—agency records, customer surveys, and trained observer ratings—can be used to obtain data on service quality.[12]

11. *Using Results-Based Budgeting for Capital Budgeting*

Many state and local governments prepare separate capital budgets, sometimes in the form of multiyear capital improvement programs. Capital budgets typically list proposed projects and the estimated capital funds required for each project in the budget year. Multiyear plans usually contain such information for each out-year. These plans may include general statements about the purposes of the expenditures, *but they seldom contain information about their expected effects on outcomes*.

There is no reason results-based budgeting should not apply to capital budgets. The agency should gain experience with result-based budgeting and then call for the explicit estimation of the effects of major capital expenditures on outcomes. For example, planned capital expenditures for road rehabilitation might be justified in terms of their expected effects on future road conditions, such as added rideability and safety, compared with the conditions that would occur without the capital expenditures. Similarly, funds for water and sewer purposes should be related to projected improvements in water quality and health protection. For capital projects that primarily benefit particular segments of the community, estimates should be provided on which, and how many, citizens are expected to benefit.

Many agencies are also faced periodically with the need to invest in information technology. These investments should be assessed not only on their costs but also on their expected benefits. For example, how does the proposed technology reduce response times to customers or change the accuracy of service delivery?

Some capital expenditures, such as those for administrative services, do not link well with end outcomes. New construction of office buildings is a good example. For this

construction, a performance measurement system might track such internal outcomes as work completed on time, work completed within budget, ratings of the quality of the facilities built, and any added efficiencies or improved working conditions for employees.

Decision makers and the public should not be expected to make capital investment decisions without information on the benefits expected from these expenditures.

12. *"Budgeting-by-Objectives" and "Budgeting for Outcomes"*

Conceptually, it makes sense for a department to submit budgets with proposed funding grouped by major objectives.[13] For example, child abuse prevention, alcohol abuse reduction, unemployment assistance, and traffic accident reduction might be major objectives. All activities related to the particular objective would be included, regardless of which program or agency is involved. Budgeting-by-objectives was a characteristic of the original program budgeting and PPBS (Planning-Programming-Budgeting-System) in the late 1960s and 1970s. However, this approach has rarely been used.

The major question that confronts organizations that try this approach is how to sort out objectives and programs. Most programs have multiple objectives, and their personnel and other resources simultaneously affect more than one objective. The crosswalk between objectives and programs or agencies can be cumbersome. If some activities simultaneously affect more than one objective, how should costs be split between them, or should they be split at all? For example, transportation programs can influence multiple objectives across a wide range of the policy spectrum, including making transportation quick and convenient, enhancing health and safety, and protecting the environment.

A recent variation of budgeting-by-objectives is "budgeting for outcomes." Here, service organizations estimate how much outcome they will provide and at what cost. The focus is not on programs but on the results the organization says it will achieve. Budgeting for outcomes encourages innovation in the way outcomes will be produced, and can even encourage providers outside the government to "bid." The government might also pre-select the major outcomes it wants and establish a total expenditure level for each outcome.[14] The State of Washington has experimented with this approach, but it is too early to assess its long-term success. The approach has some major hurdles, including the need to have good outcome information and be able to judge the claims of bidders. In addition, most government organizations seek many outcomes, and sorting them all out and determining allocations for each outcome (and what to do about outcomes that are not considered "major") present major difficulties.

At this point, it is by no means clear whether budgeting by objectives or budgeting for outcomes can be made practical. *Providing crosswalks linking activities to each outcome, however, does seem a reasonable approach* for modern information

technology (as has been done by the states of North Carolina and Oregon and by Multnomah County, Oregon). Agency programs that contribute to several outcomes can be coded to identify which programs contribute to which outcomes.[15] Such crosswalks can at least trigger the need for coordination and cooperation among programs, and they will help budget examiners detect the need for across-program budget reviews.

13. *Special Analytical Techniques for Projections*

Budgeting, like strategic planning (and unlike performance measurement), involves projecting costs and outcomes into the future. Estimating future costs, and especially future outcomes, can be very difficult, as already emphasized. Program analysis (sometimes called cost-effectiveness analysis) and cost-benefit analysis can help agencies select service delivery variations. The findings should help the agency select the service option that should be budgeted, help estimate the outcomes, and then help justify the budget proposal. These techniques have been around for many years, but their use in budget preparation and review is rare.

This book does not detail these techniques, but the following review briefly identifies the major features of each that can help in results-based budgeting.

Program (cost-effectiveness) analysis. This term applies to special quantitative analyses used to estimate the future costs and effectiveness of alternative ways to deliver a service. While program evaluation is retrospective, program analysis is prospective. The Department of Defense is one of the few agencies in the country that has designated personnel to undertake regular program analysis. Otherwise, systematic program analysis has not taken hold in the public sector or in nongovernmental organizations. The Department of Health, Education, and Welfare (now the Department of Health and Human Services) and the state of Pennsylvania had special offices with such expertise in the 1960s, when these were fashionable as part of PPBS efforts, but later discontinued them.

While some agencies have policy analysis shops, these are usually heavily qualitative. Program evaluation offices, which primarily examine past performance, may sometimes take on this role, since some of the same technical skills are involved. Information from program evaluations can be valuable when the past data can be used to help decide about the future.

For results-based budgeting, program analysis is particularly helpful when an agency proposes to introduce a new service delivery approach or a significant variation of an existing approach. Unless the delivery approach proposed closely resembles an approach for which relevant past data are available, projecting costs and outcomes from past data may not be very useful.

Agencies can consider doing pilot tests or experiments (as discussed in chapter 9), using the performance measurement system for data on the old and the new service

approaches and then using that information as the basis for estimating outcomes and costs. These procedures are worthwhile if the agencies can wait to make their final decision until the test has been completed and the findings have become available. Agencies should use the findings from such analyses and experiments to help formulate and subsequently justify budget proposals.

As the use of performance measurement, and particularly results-based budgeting, grows, the need to project outcomes systematically will also grow. The field of program analysis may then stage a comeback.

Cost-benefit analysis. Cost-benefit analysis goes one step further than program analysis. It provides a *monetary estimate of the value of a program.* (Cost-benefit analysis can also help evaluate the value of a program's past performance.) Its key characteristic is that it translates nonmonetary outcomes into monetary ones. The costs are compared to the estimated dollar benefits to produce cost-benefit ratios and estimated differences in the monetary values of the costs and benefits. Before the calculations into monetary values can be performed, the basic outcome values, usually measured in nonmonetary units, are needed. That is, program analysis needs to be done first. Cost-benefit analysis adds an additional, usually difficult, step to the process.

The monetary value of the outcomes has to be *imputed* in some way. For example, an estimate that X number of traffic accidents could be avoided by a particular activity might be converted into monetary estimates of the costs of those accidents, including damage repair, hospital and other health care, time lost from work, and the economic value of any lives lost. The costs of the activity being considered would then be compared to these dollar valuations and a cost-benefit ratio calculated.

Sound cost-benefit analysis, whether of past program accomplishments or projected program value, can provide major backup information for program budget requests. Such calculations can also appeal to public and private officials, because most outcomes are converted into dollars and summarized in one number (the cost-benefit ratio), which can be interpreted as the value of the program. One summary number is much easier for decisionmakers to handle. The usual application of this approach is to compare options within a single service area, but it could also be used to compare programs across services.

Cost-benefit analysis has a number of drawbacks. The calculations of monetary value usually require numerous assumptions that can be quite controversial. For example, how should the value of lost work time or of deaths be determined? (The value of lives lost has sometimes been estimated based on the economic potential of human beings at particular ages. This approach sounds reasonable, but giving older people little or no value in the calculations implies that it is all right to "knock off" the elderly .) Another problem is that the monetary values often accrue to different populations from the populations that pay the costs. For example, revenues for most government expenditures are raised by taxes from the public and businesses, but the benefits often accrue primarily to particular groups.

If performed and used carefully, cost-benefit calculations can provide insights into the expected value of the proposed budget for a program. However, cost-benefit analysis reports should *always* spell out the value assumptions used so readers can better understand the basis for the findings.

Cost-benefit analysis tends to be time-consuming and expensive. As a result, it has been used very selectively, primarily by the federal government. The Army Corps of Engineers has undertaken many such studies when selecting major water and other construction projects. Cost-benefit analysis has also been used, and sometimes mandated, for federal regulatory programs.

14. The Role of Qualitative Outcome Information in Results-Based Budgeting

As discussed in chapter 6, not all outcomes can be adequately measured in quantitative terms. An agency's budget process should at least *qualitatively* consider the implications of the budget for desired (and undesired) outcomes. Even if outcomes can only be expressed qualitatively, explicitly including them in the budget, and in the political debate over amounts and allocations, can help improve decisions on expenditures.

Steps for Examining Performance Information in Budget Reviews

Some basic steps for developing and examining budget requests are listed in exhibit 13-4 and discussed below.[16] Together, these steps represent a heavy workload for those reviewing or developing budget requests. However, these steps can be used selectively. They are also likely to be appropriate at any time during the year when a program seeks additional resources.

1. Examine the budget submission to ascertain that it provides the latest information and targets on workload, output, intermediate outcomes, and end outcomes—as well as the funds and personnel resources requested. The budget submission should include past data on each indicator, the latest available outcome data for the current budget year, and the targets for the fiscal year(s) for which the budget is being submitted. If an indicator is too new for data or targets to be available, the submission should note this and indicate when data will be available (both actual data and targets).

If the program does not believe it can obtain numerical values for important indicators, then it should explain why and provide qualitative information on past and expected future progress.

2. Assess whether the outcome indicators and targets are consistent with the mission of, and strategies proposed by, the program and adequately cover that mission. If the agency's programs do not have explicit mission statements that adequately define

their major objectives (such as those included in strategic plans) or descriptions of the strategies the programs propose to use to achieve the objectives, the reviewers will need to ask the program to construct these or construct these themselves—discussing them with program personnel as necessary.

For example, federal, state, or local litigation offices may emphasize deterrence of future criminal behavior in their formal mission statements. Litigation programs, however, usually have not included indicators that explicitly address deterrence. The outcome indicators tracked will probably focus on bringing offenders to justice. From the program's viewpoint this focus is reasonable, but reviewers should consider whether it is feasible to track deterrence using counts of nondeterrence as a surrogate (i.e., the amount of reported criminal behavior) or be content to seek qualitative information. (Note: Measuring deterrence directly is usually best done, if done at all, through in-depth studies and not through a performance measurement process.) Reviewers might also decide that the litigation program does not in fact have the responsibility or the capacity for estimating prevention. They might determine that the mission statement was overstated and that the program's focus on number of offenders brought to justice is appropriate.

3. If the program is seeking increased resources, assess whether it has provided adequate information on the amount each output and outcome indicator is expected to change over recent levels. The changes might be expressed as a special table showing pluses or minuses for each affected indicator. Programs need to make clear what effects their special proposals are expected to have on outputs and outcomes—not merely on funding and personnel resources.

4. Examine the program's projected workload, outputs, intermediate outcomes, and end outcomes, as well as the amount of funds and personnel. Make sure these numbers are consistent with each other (e.g., that the amount of output is consistent with the projected workload). Determine whether the program has included data on the results expected from the outputs it has identified. Use steps such as those listed in exhibits 13-2 and 13-3 to develop and examine the targets. Output indicators normally should be included in the budget submission for each major category of workload. (Note: outputs represent completed work. Workload includes work in progress and items that are pending.) Intermediate outcomes should be consistent with outputs and end outcomes consistent with intermediate outcomes. If such information has not been included, the program can be asked to provide the needed data.

The data on outputs and outcomes should be checked for consistency with each other. For example, do the number of successes for a reporting period exceed the number of cases completed during that period?

Note, however, that substantial time lags can occur between the time a customer comes in for service and the outcomes. For example, the outcome indicator "percent of cases that were successful" should be derived by dividing the number of cases expected to be successfully completed during the budget year by the number of cases completed during the year, regardless of the year the case was initiated, not by the number of cases

worked on or started during the budget year. Another example: A budget-year estimate for the outcome indicator "percent of child adoption cases in which the child was placed with adoptive parents within 24 months of the child's entry into the system" would need to be based on the number of children that came into the child welfare system two years before the budget year. Where appropriate outcome indicators and/or outcome data have not been provided, ask the program to provide them.

Two reminders:

- Outcomes can result from activities undertaken before the budget year. Also, some outcomes intended to result from the proposed budget might not occur until after the budget year. The budget submission should identify such situations.
- In the initial years of the performance measurement system, programs may not be able to provide data on some outcome indicators.

5. Compare **past data** *on workload, output, intermediate outcomes, and end outcomes with the proposed budget targets. Identify unusually high or low projected outputs or outcomes.* This can be done in at least two ways:

- Compare the latest data on actual performance to those for previous reporting periods and to the proposed budget targets.
- Compare historical data on individual outcome indicators to the past targets set for those indicators *to assess the program's accuracy in setting targets*. In light of this past experience, assess the program's proposed targets. Some agencies may have a pattern of being highly optimistic about their ability to achieve outcomes; others may have a pattern of overly conservative targets. Budget analysts should take this into account as they interpret target achievement. Ideally, targets should be set at a level that encourages high, but achievable, performance. (The budget analysis office should attempt to track the proclivities of individual program managers to set their targets overly high or low.)

Where projected performance values differ considerably from past values, or appear otherwise unusual, seek explanations. Has the program provided any other information that explains this? If not, ask for explanations. For example, if a program has the same targets it had last year, and it fell far short of those targets, ask what has changed to make the targets more achievable this year. If the program is requesting a considerable increase in funds without increasing outcome targets over previous years' actual results, ask why the added funds are needed. If a program projects lower values for outputs or outcomes, find out why. The program might report, for example, that the reason was reduced workload (check the related workload indicators), reduced resources (check the related expenditure and staffing amounts), unusually difficult or complex workload (check any evidence provided by the program), or reduced efficiency or effectiveness in delivering the service (not likely to be reported by the program).

6. Examine the explanatory information, especially for outcome indicators whose past values fell significantly below expectations and for any performance targets

that appear unusually high or low. This step should be given special attention when any of the earlier steps indicate that the performance levels projected need further examination. Explanatory information should be examined before any conclusions are drawn about the performance of the program and its resource implications.

Explanations can be substantive or be merely rationalizations or excuses. To assess the value of the explanations, the analysts may need to follow up with the program to clarify and/or obtain more information.

7. For programs likely to have delays or backlogs that might complicate program services, be sure the data adequately cover the extent of delays, backlogs, and lack of coverage. Buildups of such problems can be a major justification for added resources. The size of any delays or backlogs, and how these may be growing, can be important customer-focused, quality-of-service performance indicators for social, health, welfare, loan, licensing, and many other programs. For legal prosecutions and court cases, "justice delayed is justice denied."

Conversely, if a program's indicators show no evidence of significant delays, then existing resource levels appear adequate for the future—unless the program provides evidence that a significant buildup of its future workload is likely. Programs, where possible, should systematically categorize their incoming caseloads by level of difficulty or complexity (see chapter 8). Programs should also project the size of their caseload by difficulty or complexity as a factor in determining their proposed budget. Is there any evidence that the program is now getting or expects to get more complex and/or more difficult cases? Such changes would offer justification for additional resources.

Indicators that programs can be asked to provide include the following:

- Counts of the number of cases pending and projected at the end of each year (tracked over time, this will indicate buildups)
- Indicators of the time it has taken and is expected to take, given proposed budget resources, to complete various activities
- Estimates of the number of cases that will have to be turned away (for programs that have the discretion to turn them away)

8. For regulatory programs, be sure that adequate coverage is provided for compliance outcomes (not merely numbers of inspections). Examples include environmental regulation programs, work-safety programs, civil rights programs, and regulatory boards. The analysts should ascertain that the outputs and intermediate and end outcomes of compliance-monitoring activities are identified. For example, does the budget proposal report on expected outputs (such as the number of needed inspections that are expected), and the intervals at which they are projected to be done? Do the indicators provide past data on such outcomes as the number of organizations found in previous years not in compliance and then the number and percent that subsequently were found to have fully corrected the problems? Do the indicators include the incidence of problems that occurred despite the regulation activities? Do the budget-year projections

include such estimates for the budget period? Do the monitoring resources proposed in the budget appear too little or too large compared to the expected outcomes?

9. Ascertain that the program has sufficiently considered possible changes in workload that are likely to affect outcomes (such as higher or lower proportions of difficult workload). Programs may not report such breakouts in their budget submissions, but they are often able to supply such information. (Programs should be encouraged, for their own data analyses, to break out their outcome data by various work and customer characteristics, such as type of case, its difficulty, and different locations or facilities.) For example, federal and state correctional facilities will probably have internal reports on individual facilities and facility categories, such as security level and type of prisoner. Health and human services programs can probably provide some service data on individual facilities or offices and on various demographic groupings of clients.

Examine whether the outcomes differ substantially for some service characteristics (such as for some facilities or regions) over others. If so, examine why. This information can be very helpful in interpreting a program's projected outcome data. For example, certain types of locations or cases may be considerably more difficult to handle than others, suggesting that lower-than-desired projected performance is the result of an increase in the proportion of difficult cases and thus providing a supportable case for lower outcomes. Budget reviewers should look for evidence that substantially more cases that are difficult (or easy) are likely to come in during the budget year.

Comparing outcomes among demographic groups is also important in assessing equity and fairness. Are some groups underserved? Should additional resources be applied to those groups? Even though identifying who loses and who gains can be a political hazard, the information is basic to resource allocation. It needs to be addressed.

10. If recent outcomes for a program have been substantially worse than expected, make sure the program has included in its budget proposal the steps, and resources, it plans to take toward improvement. If the program projects improved performance, are the resources and planned steps commensurate? If not, why not? (For example, substantial time may be needed between the time that funding is approved, implementation, and the consequences of the funded activities for achievement of certain outcomes.)

11. Examine findings from any program evaluations or other special studies completed during the reporting period. Assess whether these findings have been adequately incorporated into the budget proposals. This includes studies produced by other organizations. Such information may provide added support for the activities and budget proposed by the program, or it may contradict the findings produced by the program to support its proposed activities and budget.

12. Determine whether the program has developed and used information on the relationship between resource requirements, outputs, and outcomes (e.g., the added money estimated to increase the number of successfully completed cases by a specified

amount). Assess that information for plausibility. Few programs are likely to have undertaken much systematic analysis of this relationship. Programs should be encouraged to do so to help substantiate future budget requests.

Relating expenditures and resources to outcomes (both intermediate and end outcomes) is usually difficult and uncertain. However, to the extent that additional dollars and staff enable the program to take on more work (more customers, more investigations, more road repairs, more inspections, etc.), the program can probably estimate roughly how much additional work it can handle based on past performance information. For example, a program may be able to estimate the percent of cases or incidents it might not be able to handle (such as identifying illegal immigrants) without the added funding requested.

Many, if not most, programs will be unlikely to have investigated the cost-to-output and cost-to-outcome relationships that underlie their budget requests. However, these relationships are at the heart of resource allocation decisions, implicitly if not explicitly, and the program should be pushed to be as explicit as possible about them. After all, *the projected targets the program sets each year based on its outcome indicators by definition imply such relationships, however rough the estimates may be.*

A program seeking additional resources will tend to be overly optimistic about the outcomes that will result. Budget analysts should look for supportable estimates of the relationships between resource requirements (dollars and personnel) and at least approximate values for each outcome indicator.

Over the long run, programs should be encouraged to develop information about these relationships. The analysis needed for such studies usually requires special background, however, which is not likely to be in place in most programs. Analytical staff, whether attached to each program or to a central analysis office, should be helpful for this purpose.

13. Identify indicators with significantly reduced outputs or outcomes projected for the budget year (compared to recent performance data) and no decrease in funding (adjusted for projected price increases) or staffing. Identify and assess the program's rationale. Reduced funding or staffing projections are obviously plausible rationales for reduced outcome projections, as is a more difficult or complex workload in the new year. If the program has been systematically categorizing its incoming caseload by level of difficulty or complexity, it should be able to provide evidence supporting a reduction. The program might already have in its pipeline many especially difficult cases. For example, litigation or investigation programs may be working on several cases that are highly complex and require additional program resources.

Other possible reasons for lower outcome targets include (a) an unexpected jump in workload during the budget year without an accompanying increase in resources, leading to reductions in the percent of cases for which the program can produce successful outcomes; (b) new legislative or agency policies that add complications or

restrictions, reducing the probability of successful outcomes in certain categories of cases; and (c) external events that would impair outcomes, such as the expected departure of key industries from a community, affecting local employment and income.

14. Identify outcome indicators with significantly improved outcomes projected by the program for the budget year (compared to recent performance data) and no increase in staffing, funding (adjusted for projected price increases), or output. Identify and assess the program's reasons for these increases. Budget reviewers should ask the program how it expects to achieve the improved performance—to check the plausibility of the higher targets. Such improvements might occur if the program plans to improve the efficiency of its operations. Another reasonable rationale is that the program expects its workload to be easier or less complex. The program may already have in its pipeline cases that it expects to be successful in the budget year.

15. Identify what, if any, significant outcomes from the budgeted funds are expected to occur in years beyond the budget year. Assess whether they are adequately identified and support the budget request. As noted earlier, many programs and their activities affect outcomes in years beyond the budget year (particularly federal and state programs that work through other levels of government and any investment funding). To justify expenditures for such activities, programs should project these expenditures' effects on the various outcomes for years beyond the budget year. The program should also provide rationales for such projections. Budget analysts should review these rationales for plausibility.

16. Identify any external factors not considered in the budget request that might significantly affect the funds needed or the outcomes projected. Make needed adjustments. The persons examining the budget request may be privy to information not available to those preparing it. For example, newly proposed or passed legislation or recently released economic forecasts can have major effects on the outcome projections.

17. Compare the latest program performance data to those from any other programs with similar objectives for which similar past performance data are available. Assess whether projected performance is compatible with that achieved by similar programs. This point and the next are resource allocation issues that cross program lines. Agency budget analysts should consider the performance experience of other, similar programs even if the programs are in another agency. Are the program's past accomplishments poor relative to similar programs? If so, work with program personnel to determine why and identify what can be done to improve future performance. Make any resource judgments that such future actions might entail. Does the program complement or overlap other programs' efforts? If they are complementary, check whether the data are consistent among the programs. If they overlap, consider whether altered resource allocations are appropriate to reduce the overlap.

18. Identify any overarching outcome indicators that can provide a more meaningful and comprehensive perspective on results. Consider coordinating with other programs, other agencies, and other levels of government. Few programs produce

outcomes alone, especially end outcomes. This is a core concern in performance measurement. Programs related to employment, youth development, substance abuse, crime, and so on generally involve scores of other programs that also influence the desired ends. For example, crime control involves investigation, apprehension, adjudication, punishment, and probably a variety of social services. Each component is critical to final success, and each is handled by different programs and agencies.

Look for, and examine, consolidated outcome indicators that apply to all such programs. The budget examiners should make recommendations for any needed coordination and collaboration among programs and agencies. This would include the use of common cross-cutting outcome indicators and determining the roles and responsibilities of each program in achieving jointly targeted outcomes.

For example, reduced drug and alcohol abuse involves many different programs, agencies, and sectors. Each agency with a substantial role in helping reduce substance abuse should track the overall incidence and prevalence (but one agency would normally be responsible for data collection)—recognizing that their responsibility is shared. Each program will likely have its own intermediate outcome indicators and focus on one part of the overall problem (such as on reducing drug abuse by one age group).[17]

Summary of the Relationship between Performance Measurement and Results-Based Budgeting

The primary uses of performance data in budgeting are to help formulate the budget and to make a more convincing case for the budget recommendations. Performance information, especially if it includes credible outcome data, should lead to better choices and more convincing choices than are possible in its absence. Outcome targets for the budget year also establish a baseline for accountability (encouraging reviews of actual accomplishments throughout the year and at year's end).

Performance measurement of outputs, outcomes, and efficiency for past years is important for budget allocation decisions. First, the performance information provides baseline data on outcomes, which is fundamental for making decisions. *If you do not know where you are, you will have difficulty determining where you need to go*. Second, historical data are usually a primary *basis* for budget projections of future accomplishments.

Making projections for the budget year and beyond is considerably more difficult and is subject to *much* more uncertainty than measuring past performance. The future is very hard to predict, even if for only one or two years, because of the many external factors that can affect results. This problem becomes particularly troublesome if the program is suggesting significant new program variations or new programs to tackle its mission. Then past data will be a much less adequate guide to the future.

However uncertain the data, addressing the relationship of inputs to outcomes should be a major issue in making resource allocation decisions and budget justifications in any budgeting system. *Even if such discussions are heavily qualitative and judgmental, they are far better than nothing, because they encourage those making budget decisions to focus on what is most important to achieve.*

The budget review effort should be viewed as an opportunity for both the program and the agency's budget review staff to develop the best possible budget, to make the best possible case for budget requests, and to focus on maximizing outcomes for a given amount of resources. The inherent tension between budget analysts who perceive their primary job as keeping costs to a minimum and program personnel who want to obtain as many resources as they can will inevitably pose problems. The two groups will find the process much less difficult and less contentious if they work to make it as much of a partnership as possible. The interests of both groups are best served if the final resource allocation decisions forwarded to higher levels are presented as effectively as possible. These days, that means proposals need to be justified, at least in part, based on outcomes—the potential benefits to the public.

Exhibit 13-1
Key Issues in Results-Based Budgeting

1. Need to increase focus on outcomes, not only inputs and outputs

    2. Limitations in the usefulness of performance measurement information for results-based budgeting

3. Time frame that should be covered by results-based budgeting, especially considering that outcomes often occur years after the one in which the funds were budgeted

4. Whether proposed inputs can be linked to outputs and outcomes

5. The role of efficiency indicators

6. Setting performance targets in budgets

7. Use of explanatory information

8. Strength of program influence over future outcomes

9. Using performance information in formulating and examining budget requests

10. Applying results-based budgeting to internal support services

11. Using results-based budgeting for capital budgeting

12. "Budgeting-by-objectives" and "budgeting for outcomes"

13. Special analytical techniques for projections

14. The role of qualitative outcome information in results-based budgeting

Exhibit 13-2
Suggested Steps in Developing Outcome Targets

1. Examine the agency's strategic plan (if one exists). Targets contained in the budget should be compatible with targets in the strategic plan.

2. Analyze the historical relationships between inputs (expenditures and staffing), outputs, and outcomes. Examine any explanatory information that accompanied the historical data. Use that combination of information to provide an initial estimate of targets compatible with the amount of resources being considered for the program's proposed budget.

3. Consider each factor listed in exhibit 13-3 (such as outside resources, environmental factors, changes in legislation or requirements, and expected program delivery changes) and adjust the targets accordingly.

4. Consider the level of outcomes achieved by similar organizations or under various conditions (as discussed in chapter 9). For example, the outcomes achieved by better-performing offices or facilities that provide similar services are benchmarks the program may want to emulate.

5. Review the findings and recommendations from any recent program evaluations to identify past performance levels and past problems. Consider their implications for the coming years.

6. Use program analysis, cost-effectiveness analysis, and/or cost-benefit analysis to estimate the future effects of the program.

Exhibit 13-3
Factors to Consider When Selecting Specific Outcome Targets

- *Past outcome levels I.* The most recent outcomes and time trends provide a starting point for setting the outcome targets. (For example, recent trends may indicate that the values for a particular outcome indicator have been increasing annually by 10 percent in recent years; this would indicate the next year's number should be increased by a similar percentage.)

- *Past outcome levels II.* If the values for an outcome indicator are already high, only small improvements in the outcome level can reasonably be expected. If the values for an outcome indicator are low, future improvements can be expected to be larger (there is more room for improvement).

- *Amount of dollar and personnel resources expected to be available through the target period.* If staff and funds are being reduced or increased, how will this affect the program's ability to produce desired outcomes?

- *Amount of outside resources expected to supplement the program's resources.* Potential sources include other agencies, foundations, volunteers, and the business community. If such resources can play a significant role in producing the outcomes sought by the program, and the program has indications that these are being significantly increased or decreased, how is this likely to affect the outcomes?

- *Factors likely to be present in the wider environment through the target period.* These include such factors as the economy, population demographics, weather, major changes in industries in the area (such as major new industries scheduled to begin or depart), and major changes in international competition.

- *Recent or pending changes in legislation and other requirements of higher-level governments.* To what extent are they likely to increase or decrease the ability of the program to produce favorable outcomes?

- *Changes planned by the program in policies, procedures, technology, and so on.* It is important to consider lead times to implement such changes.

- *Likely lag times from the time budgets are approved until the outcomes are expected to occur.* This applies both to the effects of past years' expenditures on the outcome values targeted for the budget year and to the likely timing of outcomes produced with the funds allocated in the budget year. (For some outcome indicators, effects will be expected in the budget year, but for others, effects will occur primarily in years after the budget year.)

- *Political concerns.* Politics may at times push for reporting outcome targets that exceed feasible levels. (Even so, the program and budget analysts should provide those selecting the targets with estimates of the likely achievable levels of outcomes.)

Exhibit 13-4
Steps for Examining Performance Information in Budget Requests

1. Examine the budget submission to ascertain that it provides the latest information and targets on the workload, output, intermediate outcomes, and end outcomes—as well as the funds and personnel resources requested.

2. Assess whether the outcome indicators and targets are consistent with the mission of, and strategies proposed by, the program and adequately cover that mission.

3. If the program is seeking increased resources, assess whether it has provided adequate information on the amount each output and outcome indicator is expected to change over recent levels.

4. Examine the program's projected workload, outputs, intermediate outcomes, and end outcomes, as well as the amounts of funds and personnel. Make sure these numbers are consistent with one another (e.g., that the amount of output is consistent with the projected workload). Determine whether the program has included data on the results expected from the outputs it has identified.

5. Compare *past data* on workload, output, intermediate outcomes, and end outcomes with the proposed budget targets. Identify unusually high or low projected outputs or outcomes.

6. Examine the explanatory information, especially for outcome indicators whose past values fell significantly below expectations and for any performance targets that appear unusually high or low.

7. For programs likely to have delays or backlogs that might complicate program services, be sure the data adequately cover the extent of delays, backlogs, and lack of coverage.

8. For regulatory programs, be sure that adequate coverage is provided for compliance outcomes (not merely number of inspections).

9. Ascertain that program has sufficiently considered possible changes in workload that are likely to affect outcomes (such as higher or lower proportions of difficult workload).

10. If recent outcomes for a program have been substantially worse than expected, make sure the program has included in its budget proposal the steps, and resources, it plans to take toward improvement.

11. Examine findings from any program evaluations or other special studies completed during the reporting period. Assess whether these findings have been adequately incorporated into the budget proposals.

12. Determine whether the program has developed and used information on the relationship between resource requirements, outputs, and outcomes (e.g., the added money estimated to increase the number of successfully completed cases by a specified amount).

13. Identify indicators with significantly reduced outputs or outcomes projected for the budget year (compared to recent performance data) and no decrease in funding (adjusted for projected price increases) or staffing. Identify and assess the program's rationale for these reductions.

14. Identify outcome indicators with significantly improved outcomes projected by the program for the budget year (compared to recent performance data) and no increase in staffing, funding (adjusted for projected price increases), or output. Identify and assess the program's reasons for these increases.

15. Identify what, if any, significant outcomes from the budgeted funds are expected to occur in years beyond the budget year. Assess whether they are adequately identified and support the budget request.

16. Identify any external factors not considered in the budget request that might significantly affect the funds needed or the outcomes projected. Make needed adjustments.

17. Compare the latest program performance data to those from any other programs with similar objectives for which similar past performance data are available. Assess whether projected performance is compatible with that achieved by similar programs.

18. Identify any overarching outcome indicators that can provide a more meaningful and comprehensive perspective on results. Consider coordinating with other programs, other agencies, and other levels of government.

References and Notes

1. Personal communication with David Strauhs, Commissioner of Massachusetts Department of Environmental Protection, December 4, 1997.

2. The OMB web site fully describes the PART process. The web site also presents the detailed ratings for each federal program. See, for example, a PowerPoint summary of the process, "Program Assessment Rating Tool (PART): Improving Performance," March 2005.

3. The word *target* is not always used in this context. The Government Performance and Results Act of 1993 uses the term *annual goals*. Another terminology problem arises for programs, such as law enforcement, in which the word *targets* for some outputs or intermediate outcomes might be interpreted as establishing quotas, such as on the number of arrests, prosecutions, or collections. For this reason, programs whose missions are investigative, such as criminal investigation activities, might use another, more neutral, label, such as *projections*.

4. The terms *performance-based budgeting* and *budgeting-for-results* are also used.

5. This book does not address the many issues involved in developing comprehensive cost estimates for particular programs, such as how to handle indirect or capital costs. For many public and private agencies, cost accounting is deficient. Efforts such as activity-based costing may help, but they still have substantial limitations for projecting future costs. More important for budget formulation is for agencies to have good cost *analysis* capability—that is, to be able to estimate the likely *additional* expenditures that will be incurred to produce particular outcome levels. One approach to cost analysis is contained in David H. Greenberg and Ute Appenzeller, *Cost Analysis Step by Step: A How-to Guide for Planners and Providers of Welfare-to-Work and Other Employment Training Programs* (New York: Manpower Demonstration Research Corporation, October 1998).

6. This, however, can be a major problem for developing countries that have not yet established reasonably accurate procedures for tracking expenditures and outputs.

7. Those readers who do not believe that response times to requests for services should be labeled an outcome might prefer a label such as *quality-of-output* indicator.

8. For the application of performance targeting in other countries, see Sylvie Trosa, "Public Sector Reform Strategy: A Giant Leap or a Small Step?" in *Monitoring Performance in the Public Sector: Future Directions from International Experience*, edited by John Mayne and Eduardo Zapico-Goni (New Brunswick, NJ: Translation Publishers, 1997).

9. Preferably, an agency would sponsor in-depth program evaluations for each of its major programs, say, once every few years. New programs might be required to provide an evaluation strategy. Unfortunately, in-depth evaluations are expensive and time-consuming. Agencies and programs with highly limited resources might instead schedule periodic, but less comprehensive, reviews of each of their programs to learn more about how well they are working and why.

10. Degree of influence does not refer to the ability of an agency or program to *manipulate* the data to its own advantage. That is a quality control issue, discussed in chapter 14.

11. The costs of support services, however, need to be considered when analyzing the total costs of a program and comparing its costs to its benefits.

12. Note that activities relating to collecting revenues, such as taxes and fees, are *not* included here as "internal" activities. Performance indicators indicating the extent of success, such as "percent of owed taxes that were collected," can be considered major outcome indicators for governments.

13. This approach is discussed in Mark Friedman, *A Guide to Developing and Using Performance Measures in Results-Based Budgeting* (Washington, DC: The Finance Project, May 1997).

14. This approach is presented in *The Price of Government* by David Osborne and Peter Hutchinson (New York: Basic Books, 2004), especially chapter 3.

15. An example of this is the crosswalk developed by the Oregon Progress Board and the Department of Administrative Services, *1999 Benchmark Blue Books: Linking Oregon Benchmarks and State Government Programs* (Salem, May 1999).

16. Few publications are available that suggest specific steps for reviewing budget proposals that include examining the outcome consequences of the proposed budget levels. A recent document prepared for state legislative analysts nevertheless appears also applicable to budget examinations for any level or branch of government: "Asking Key Questions: How to Review Program Results" (Denver, CO: National Conference of State Legislatures, 2005). However, it primarily focuses on past results, rather than also including an examination of the proposed outcomes.

17. The U.S. Office of Drug Control Policy has been a leading agency in attempting to work out such cooperative efforts among federal, state, local, and foreign governments. See, for example, "National Drug Control Strategy: FY 2007 Budget Summary" (Washington, DC: The White House, 2006).